

# NON-ALCOHOLIC OR LOW ALCOHOL BEER PRODUCTION



Traditional, large scale non-alcoholic beers are produced using methods such as distillation or very fine membrane filtration. Additional methods, such as using a low alcohol producing yeast strain, can be used. These yeast typically dislike maltose and will produce between 15-25% attenuation depending on the mash recipe.

## YEAST SUGGESTIONS:

Low Alcohol producing yeast strains will impart lower flavor attributes than traditional brewing strains due to reduced amount of sugars fermented.

- **WLP603 *Torulaspora delbrueckii***  
High ester production. Suitable for a fruit- forward IPA or Saison.
- **WLP618 *Saccharomyces ludwigii***  
Low ethyl acetate production. Great for all styles of low alcohol beer.
- **WLP686 *Zygosaccharomyces lentus***  
Very neutral. Little ester production.

## TIPS AND TRICKS:

- Mash recipe will need to reflect a lower amount of fermentables available for the yeast.  
**See recipe example on next page.**
- Hop extracts, flavoring can help reduce o flavors such as a “worty” character.
- Blending can help achieve a better tasting beer with a low ABV.
- Small scale trials are suggested to optimize nutrients, yeast, and mash for a lower alcohol fermentation.

## SUGGESTED PITCHING RATE:

- **2,000,000 cells/ml**

## SUGGESTED ANALYTICAL LABORATORY TESTING SERVICE:

- **LS6670** - Sugar Profile by HPLC
- **LS6646** - Alcohol by Volume/Weight

# LOW ALCOHOL PILSNER

**Brew Method:** All Grain

**Style Name:** German Pilsner

**Boil Time:** All Grain

**Efficiency:** 76% (ending kettle)

## FERMENTABLES:

German - Pilsner (88.2%)

German - Wheat Malt (5.9%)

German - Caramel Pils (5.9%)

## YEAST:

**WLP603** *Torulaspota delbrueckii*

**Flocculation:** Medium

**Attenuation:** 26%

**Fermentation Temperature:** 10°C

## HOPS:

Select depending on your desired flavor profile

## MASH GUIDELINES:

**Temperature:** 72°C

**Time:** 60 minutes

## STATS:

**Original Gravity:** 1.016

**Final Gravity:** 1.013

**ABV:** 0.5%

**IBU:** 19.19

**SRM:** 1.44